REMARKS

I. INTRODUCTION

In response to the Office Action dated August 10, 2005, claim 18 has been amended, and claims 20-26 have been canceled. Claims 1-3, 5-15, and 17-19 remain in the application. Entry of these amendments, and re-consideration of the application, as amended, is requested.

II. CLAIM AMENDMENTS

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made for the purpose of expediting prosecution and with the intent of pursuing further claims in continuing patent applications.

III. STATUS OF CLAIMS

Claims 1-3, 5-15, and 17-19 are pending in the application.

Claims 1-3, 5-15, and 17-26 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,020,796 to Collar et al. (Collar), and these rejections are being appealed.

Claims 18 and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,649,306 to Vannatta et al. (Vannatta), and these rejections are being appealed.

Claims 18 and 20 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,560,443 to Vaisannen et al. (Vaisannen), and these rejections are being appealed.

IV. GROUNDS OF REJECTION

Whether claims 1-3, 5-15, and 17-19 are patentable under 35 U.S.C. § 102(b) over U.S. Patent No. 6,020,796, issued to Collar et al. (hereinafter, the Collar reference).

Whether claims 18 and 20 are patentable under 35 U.S.C. § 102(b) over U.S. Patent No. 5,649,306 issued to Vannatta et al. (hereinafter, the Vannatta reference).

Whether claims 18 and 20 are patentable under 35 U.S.C. § 102(e) over U.S. Patent No. 6,560,443 issued to Vaisannen et al. (hereinafter, the Vaisannen reference).

V. GROUPING OF CLAIMS

The rejected claims do not stand or fall together. Each claim is independently patentable. Separate arguments for the patentability of each claim are provided below.

VI. ARGUMENTS

A. The Cited References and the Subject Invention

1. The Collar Reference

U.S. Patent No. 6,020,796, issued February 1, 2000 to Collar et al. discloses a switching means for use on-board a spacecraft. The switching means has a first set of switches for receiving respective channel slots of de-multiplexed narrow band channels. The set of switches may be made up of four position switches 5.sup.1, 5.sup.2 etc. Switch 5.sup.2 may be connected straight through, or to the straight through positions of switches 5.sup.1 and or 5.sup.3 via interswitch connections. The same is possible with the second set of switches 6. A wide selection of the possible frequency slots is possible (for example eight out of sixteen) to allow routing among the amplifiers 9, 10, some of which are designated as redundant.

2. The Vannatta Reference

U.S. Patent No. 5,649,306, issued July 15, 1997 to Vannatta et al. discloses a portable radio housing incorporating diversity antenna structure. The radio communication device (50) has a housing having a first housing element (51) and a second housing element (53). The first housing element (51) is movable between an extended and a closed position. The radio communication device has at least two antennas (112, 113). A switch (121) is provided that is operable to switch between a first antenna (112) and a second antenna (113) responsive to position of the first housing element (51). Preferably the first antenna (112) is disposed in the first housing element (51) and the second antenna (113) is disposed in the second housing element (53) or a battery housing (57).

3. The Vaisannen Reference

U.S. Patent No. 6,560,443, issued May 6, 2003 to Vaisannen et al. discloses an antenna sharing switching circuitry for multi-transceiver mobile terminal. Antenna switching circuitry in a

multi-transceiver mobile terminal 10, which features a first switching unit (SW1) which controllably couples a first transceiver port (P.sub.1) to either a first antenna port (P.sub.A1) or a second antenna port (P.sub.A2); and a second switching unit (SW2) which controllably couples the second antenna port (P.sub.A2) to either the first transceiver port (P.sub.1), through the first switching unit (SW1), or to an input/output port (P.sub.I/O) of a second transceiver (12). According to this scheme, the second antenna port is coupled to the input/output port of the second transceiver (12) in a mode in which the second transceiver (12) is operational, the first transceiver port (P.sub.1) being decoupled from the second antenna port at this time, wherein the first transceiver port is coupled to the first antenna port and the input/output port of the second transceiver (12) is decoupled from the second antenna port, when the first transceiver is in a transmit mode, and wherein the first transceiver port is coupled to either of the first and second antenna ports, when the first transceiver (11) is in a receiving mode and the input/output port of the second transceiver (12) is decoupled from the second antenna port.

2. Independent Claim 1 is Patentable Over the Collar reference

The Final Office Action reasserts the rejection of rejected claims 1-3, 5-15, and 17-26 under 35 U.S.C. § 102(b) as being anticipated by Collar. The Applicants respectfully traverse.

With Respect to Claims 1 and 11: As amended, claim 1 recites:

> *An transponder system, comprising:*
> *an amplifier network having a plurality of amplifiers;*
> *an antenna network, comprising a plurality of antennae;*
> *a single rail output switching network, including a first output switching network switch, selectably coupling one of the amplifiers to one of the plurality of antennae at a first output switching network switch first switch state and to a second output switching network switch in a first output switch network switch second switch state; and*
> *wherein the second output switching network switch is selectably coupled to a second one of the plurality of antennae in a second output switching network switch first switch state and to a third one of the plurality of antennae in a second output switching network switch second switch state.*

In response to the First Office Action, the Applicants pointed out that the Collier reference disclosed a rather traditional dual rail switching network, not the single rail network with the connectivity described in claim 1. In response, The Final Office Action states that the teachings of

col. 5, lines 17-21

> "teaches other embodiments that rearranges the dual rings into a single ring or single rail with deletions of existing links or rings." (emphasis added)

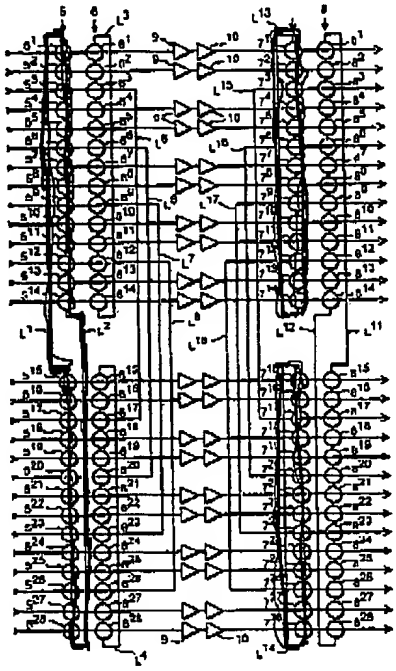
This statement incorrectly equates *rings* with *rails*. The two structures are not the same. Further, even if the teaching of the Collier reference were applied (it is reproduced below), the resulting structure is nothing like that which is recited in claim 1. The referenced portion of the Collar reference are presented below:

> Of course variations are possible without departing from the scope of the invention. Thus, while twenty-eight switches are shown, the invention is applicable to more or less then this number. Equally while twenty amplifiers are shown, six being redundant, different numbers of redundant amplifiers may be provided, and different numbers of amplifiers designated as working may be provided, depending on the number of channels being used. The switches 5 (and 8) may be arranged in two rings, like the switches 6, 7, or the latter may be arranged in a single ring. Alrernatively, the links L.sup.1, L.sup.2 may be omitted altogether, as could be the links L.sup.5, L.sup.6, L.sup.7, L.sup.8, and similarly on the output side. While it is preferred that all the switches are four port switches, some of the switches may be two port switches (either allowing straight through communication or preventing straight through communication), or some may be three port (adjacent pairs of switches 5 or 6 may be interconnected but not connected to the switches on either side of the pair, with the corresponding changes on the output side.)

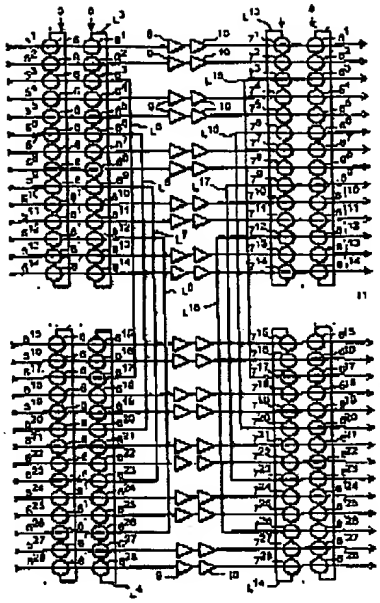
Turning to each of these teachings one at a time:

Changing the number of switches or amplifiers: No analysis is required here. Clearly, the basic architecture does not change in this instance.

"The Switches 5 (and 8) may be arranged in two rings, like the switches 6 and 7": Referring to FIG. 3 below, one can see that switches 5 (with the additional black line) and 8 are arranged into one ring, while switches 6 (also with an additional black line) and 7 are arranged into two rings:



This suggested modification (arranging switches 5 and 6 into two "rings") would result in the following structure:

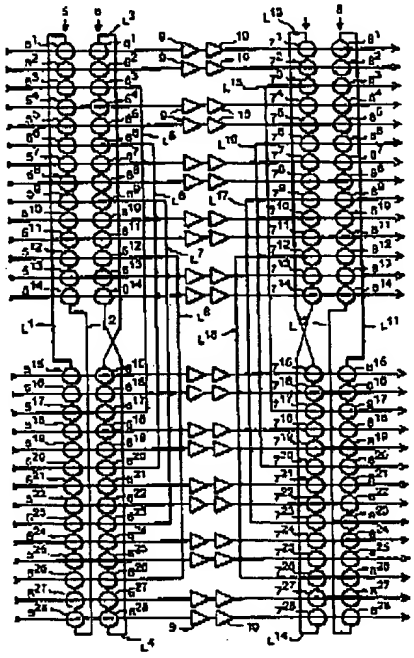


As a threshold matter, this is not a single rail output switching network. It is a double rail input switching network combined with a double rail output switching network.

The foregoing also does not disclose a structure with a first switch selectably coupling one of the amplifiers to one of a plurality of antennae in a first state and a second switch in a second state along wherein the second output switch is selectably coupled to a second one of the plurality of antennae in a first switch state and a third one of the plurality of antennae in the second switch state.

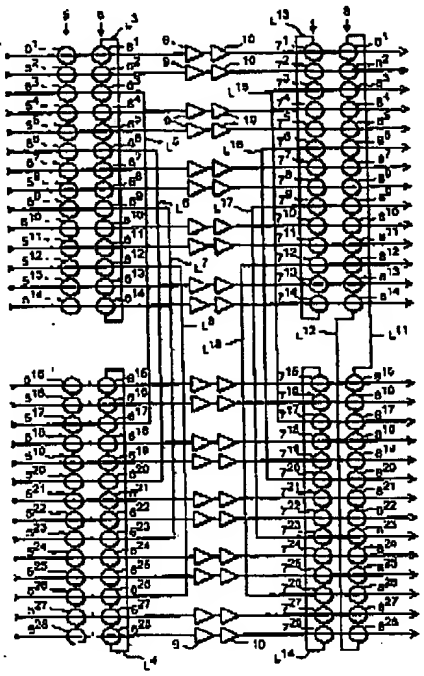
Switches 7^1-7^{28} select between switches 8^1-8^{28} (which now read as 6^1-6^{28} in order for the Applicant to modify FIG. 3 as required) respectively, not a one of a plurality of antennae. Only switches 8^1-8^{28} switch between a second switch (e.g. the switch above or below it) and an antenna (the output). Claim 1 then requires that one of these switches is coupled to a *second one of the plurality of antennae* when in a first state and a *third one of the plurality of antennae* when in a second switch state. Switches 6^1-6^{28} clearly do not provide this arrangement. If the Applicants are incorrect about this, they would appreciate the Examiner's guidance as to which switches must be in which position for the above structure to read on claim 1. As far as the Applicants can tell, no combination of switch positions can provide a structure that reads on the Applicants' claims

"... or the latter may be arranged in a single ring": This teaches the following structure:



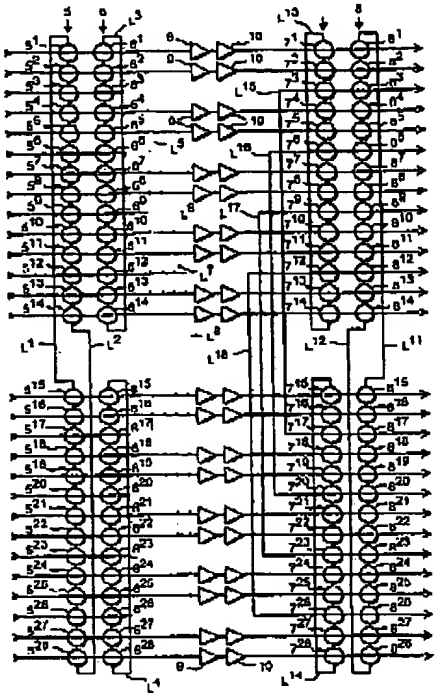
This is also not a single rail output switching network. It is a double rail output switching network in which the output signal always passes through at least two switches.. Likewise, it does not disclose the connectivity recited in claim 1.

"Alternatively, the links L.sup.1, L.sup.2 may be omitted altogether": This results in the following structure



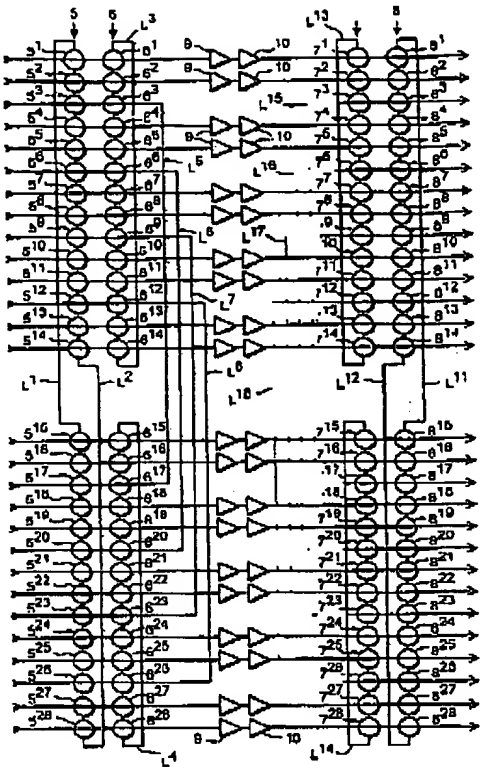
L1 an L2 were part of the *input* switching network, not the *output* switching network. But in any case, this likewise discloses a double rail input and double rail output structure in which the output signal always passes through at least two switches.

"...as could be the links L.sup.5, L.sup.6, L.sup.7, L.sup.8:



Again, links L5-L8 are on the input switching network, not the output. But in any case, the result is still a double rail structure in which the output signal always passes through at least two switches.

"and similarly on the output side":



Here, we have the modifications on the output switching network, but it still discloses a double rail switching network in which the output signal always passes through at least two switches.

With regard to this construct, the Office Action remarks:

> "links L_{12}, L_{13}, L_{15} through L_{18} on the output side are eliminated. Therefore only link L_{11} (single ring) is a single rail on the output side of figure 3"

however, this is not true. With the modifications above, the output switching network remains a dual rail network (switches 7 and 8), because the switches in the first rail (7) are still used to route the signals from the amplifiers to the switches in the second rail (8). The Office Action has erroneously interpreted Collar to infer that the first rail (7) can be eliminated, and this is not what Collar teaches or suggests.

The analysis of claim 11 is analogous.

With Respect to Claim 18: As amended, claim 18 recites:

A method of providing a signal to any one of a plurality of output devices, comprising the steps of:
receiving the signal in a first switch;
selectably coupling the signal to a first output device or a second switch via a first switch according to a first switch selection; and
selectably coupling the signal from the first switch to a second output device or a third output device if the signal is not coupled to the first output device via the second switch according to a second switch selection; and
wherein the signal is selectably coupled to the first output device by no more than one switch.

Claim 18 has been amended to recite the features of claim 24 (now canceled). As such, this amendment should be entered, as it does not require additional search.

As amended, claim 18 recites that the signal is selectably coupled to the first output device by no more than one switch. The Office Action asserts that after Collar is rearranged as described, only row 8 remains, thus presenting a single rail.

The problem with this argument is that there is no suggestion in Collar to eliminate rail (7). As presented above, the switches in rail (7) remain. Accordingly the Applicants respectfully traverse.

Claim 18 was also rejected under Vanetta. The Final Office Action argues that the step of selectably connecting the received signal a first output device or a second switch via a first switch is disclosed by "selecting connecting the received signal to either the speakerphone 178 or the sensor 199." However, the switch 121 operates to couple either antenna 112 or antenna 120 to switch 130. It does not provide the signal from 112 to either an output device or a switch, as recited in claim 18.

Further, the input signal is never connected to an output device at all. Instead, it is provided to receiver circuitry 166, processor 198, and transmitter circuitry 190, where it is substantially processed, and an entirely different signal is provided to the output devices. Connecting a speaker 178 to the signal from the antenna 112 would provide nothing but silence.

Finally, the Office Action indicates that the step of selectably coupling the signal from the first switch to the second output device or a third output device via the second switch according to a second switch selection is disclosed by "selectively coupling the received signal to one of the output devices of the speakerphone 178 and microphone via switches 121 and 130." However, (1) a microphone is not an output device, (2) the switches do not provide the signal as alleged, and (3) the

signals that are provided to the speakerphone are not the same as the received signal.

Claim 18 is also rejected as unpatentable over Vaisanen. Here, the Final Office Action argues that SW2 connecting to BT or WLAN 11 reads on selectably coupling the signal to a first output device or a second switch. (The claim recites that the signal is connected to a first output device or a second switch, so the Applicants will assume the Examiner meant that this feature is shown by SW2 connecting to BT or SW1). The Office Action then argues that the step of selectably coupling the signal from the first switch to a second output device or a third output device if the signal is not coupled to the first output device via the second switch is shown by "selectively coupling the received signal to one of the output devices of 'BT 12' and 'WLAN 11' via one or both of switches 'SW1' and 'SW2'". However, plainly, SW1 does not couple the signal to a second output device and a third output device as required ... it merely connects the signal to the WLAN, but not a third device.

B. The Dependent Claims Are Patentable Over The Prior Art

1. Dependent Claims 2, 3, 5-10, 12-15, 17, 19-21 are Patentable Over the Cited References

Dependent claims 2, 3, 5-10, 12-15, 17, 19-21 recite the features of the claims they depend upon, and are patentable on this basis alone. In addition, these claims recite features rendering them even more remote from the cited references. Accordingly, their allowance is respectfully requested.

VII. CONCLUSION

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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